Washington Park Arboretum

BULLETIN

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Washington Park Arboretum

The Arboretum is a 230-acre dynamic garden of trees and shrubs, displaying internationally renowned collections of oaks, conifers, camellias, Japanese and other maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington Botanic Gardens and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

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The Arboretum Foundation's mission is to create and strengthen an engaged community of donors, volunteers and advocates who will promote, protect and enhance the Washington Park Arboretum for current and future generations.

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ABOVE: Turkey tail fungus on a nurse log in the Arboretum. (Photo by Niall Dunne)

ON THE COVER: Colorful bark of a birchbark cherry (*Prunus serrula*) on the south end of Azalea Way, across from the new Centennial Garden. (Photo by Niall Dunne)

OPENINGS

I recently bought a 2018 calendar, carefully selecting which images would most make me smile when it was time to flip the page. Each year this little ritual sparks optimism for what lies in the months ahead, what new opportunities might open. I'd like to tell you about two such openings in the Arboretum that particularly excite me.

The first is our Winter Garden Carnavale, this February's Opening Night Party and Auction for the Northwest Flower & Garden Festival. There, guests will enjoy an intimate preview of the Garden Festival's beautiful horticultural exhibits, including the Arboretum display, which celebrates the 30th anniversary of the iconic Witt Winter Garden.

Even while shorter days and rainy mornings mark our Seattle winter, the Winter Garden delights visitors with its diverse palette of late-season plants, including the fragrant witch-hazel *Hamamelis* × *intermedia* 'Arnold's Promise' and the showy *Camellia sasanqua* 'Setsugekka'. Both these specimens and many more will be showcased in our Garden Festival display. Entitled "Arboretum Carnavale: Wonders of the Winter Garden," the multi-sensory creation designed by Bob Lilly, Phil Wood and Roger Williams is modelled on the Winter Garden, with its rich backdrop of evergreen trees, and will celebrate nature's cold-weather extravagance.

Camellia sasanqua 'Setsugekka' blooming in the Witt Winter Garden. (Photo by Niall Dunne)

As it happens, 2018 also marks the 30th year of the Garden Festival itself. The inaugural show in 1989 was the first major public event to be held in the newly opened Washington State Convention Center! In a wonderful parallel, winter-garden plants were also highlighted in the Arboretum display at the show that year, following the rededication of the Witt only a few months before. It's wonderful to see investments of 30 years ago bearing fruit today.

The Garden Festival runs from February 7 to 11. For the ultimate celebration of the senses, join us for Winter Garden Carnavale on Tuesday, February 6! Our party co-chairs, Jenny Wyatt and Carol Hoerster, are preparing a wonderful lineup of performers, a delicious dinner, and the chance to bid on Arboretum experiences not available anywhere else. There will be a variety of meaningful ways to support the Arboretum, and we hope to see many of you there.

The second opening of note occurred in November, when construction fences came down, and the new Arboretum Loop Trail opened to the public. This 1.2-mile pedestrian and slow-cycle path parallels Lake Washington Boulevard and connects to both ends of Arboretum Drive, making a 2.5-mile loop. In addition to being a wonderful new destination for recreational enthusiasts, the Loop Trail improves visibility to areas of the Arboretum that had previously been off-view—such as sections of Arboretum Creek and the surrounding wetlands.

Final work on the project, including additional plantings and signage, will be completed in the coming months. Stay tuned for details about a Grand Opening celebration for the Loop Trail this spring.

Best wishes for the New Year and your own set of openings.

Jane Stonecipher
Interim Director
Arboretum Foundation

New Plantings in the Arboretum

THE YEAR IN REVIEW

TEXT BY RAY LARSON
PHOTOS BY NIALL DUNNE

Over the past year, many physical changes have taken place in the Arboretum, particularly with the continued construction of the Arboretum Loop Trail. But we've also been developing our living collections, by adding new plantings around the park and acquiring other specimens related to the trail project.

Loop Trail Plans

As curator, I've spent much of 2017 planning for the planting that will occur along the Loop Trail after the completion of major construction. A primary focus has been the area at the south end of the Arboretum, where the trail crosses through the future Pacific Connections China and Chilean forests. At these intersections, we have begun planting trees, shrubs and perennials native to south-central Chile and to Mount Emei, in the Sichuan Province of China.

Over the last two years, I have developed species lists for the intersections and have been acquiring plants from local nurseries and specialists. These include several of the 20-plus species of rhododendrons native to Mount Emei, as well as plants grown from wild-collected seed, such as *Sorbus*, *Berberis* and *Emmenopterys henryi*. The latter tree was described by plant explorer Ernest Henry Wilson as one of the "most strikingly beautiful trees of Chinese forests." It typically takes decades to flower in cultivation and rarely does; however, it is worth growing for the leaves alone, which are large and emerge in hues of red and copper-red.

As I write this review, in late October, trail construction is close to complete, and we hope to begin planting the Pacific Connections areas in earnest soon. The planting of other areas along the trail depends somewhat on ensuring that the impacts of construction on the soil have been mitigated.

However, look for new plantings at the north end of the Arboretum, on the large bank northeast of the Wilcox Bridge and at the north end of East Foster Island Road. These will be a mix

ABOVE: The Loop Trail running through the wetlands north of the Birch Parking Lot. New plantings of native perennials line the trail here.

Fall color on a young sourwood tree (*Oxydendrum arboreum*) in the new Centennial Garden.

of rhododendrons; viburnums; smaller, mostly shrubby oaks; and other mostly spring- and summer-flowering shrubs. One specimen tree that I'm particularly excited about is *Quercus hypoleucoides*, the silverleaf oak. It's an evergreen species native to higher elevations in the southwestern United States and Mexico, and it bears dark-green, lance-shaped leaves with silver-white undersides. We currently have one in the Oak Collection, not far from the bridge, but it is in too much shade. The new tree will be planted in a sunnier location by the trail to the north of the bridge, so it should do much better—and it will be easier to see and enjoy.

There will also be new plantings at the south end of the trail, southeast of the Stone Cottage. The areas at the cottage, and those to the north of the bridge, are prominently located along the roads through the Arboretum and will be planted with trees and shrubs that were propagated from existing collections by the Port Townsend-based nursery Far Reaches Farm in the early stages of the project.

Look for other new plantings in the viburnum and oak collection areas as well. We anticipate planting will continue along the newly opened trail through spring and into the fall of 2018.

Mitigation Plantings

Ohno Construction completed the wetland mitigation plantings of native species along the new Loop Trail in September, and these plants will be monitored for a year to assess establishment. Any plants that don't make it through year one will be replaced as needed by Ohno.

I worked with the trail designer, the Berger Partnership, to diversify the typical palette seen in restoration plantings. As a result, many new species have been added to the Arboretum that were historically native to Seattle. These include star-flowered solomon's-seal (*Maianthemum stellatum*), red columbine (*Aquilegia canadensis*), common camas (*Camassia quamash*), and many others. Most of the thousands of mitigation plantings are perennials and grasses, but look for dozens of new trees as well—such as vine maple (*Acer circinatum*), shore pine (*Pinus contorta* subsp. *contorta*), cascara (*Rhamnus purshiana*), and paper birch (*Betula papyrifera*).

In addition, several hundred conifers were planted by city contractors in the areas around the Washington Park Playfield. These trees will help restore the evergreen element to the matrix of second- and third-growth bigleaf maples, cottonwood and alder currently in that location.

TOP: Fall foliage on the new *Stewartia pseudocamellia* at the north end of Azalea Way.

MIDDLE LEFT: New plantings of hydrangeas and camellias in the Camellia Collection.

Centennial Garden Specimens

While planning for the trail plantings has consumed much of our time in the last calendar year, we have made enhancements in several other areas of the Arboretum. Perhaps the largest and most noticeable is the Centennial Garden, a new display north of the large pond on Azalea Way, just below the Lookout Gazebo. Opened in mid-September, this garden was made possible by the Seattle Garden Club and celebrates the organization's 100th anniversary in 2017. It continues the Club's longtime support of the Arboretum and brings a splash of spring and summer color to the south end of Azalea Way.

More than 500 plants were added to new beds on the edge of the pond. The plantings echo the collections in adjacent Rhododendron Glen and Azalea Way and create a new ornamental destination garden in the Arboretum. Ericaceaeous plants include *Oxydendrum arboreum*, *Enkianthus campanulatus* 'Showy Lantern', and *Rhododendron* 'Percy Wiseman'. Five varieties of hydrangea—along with sweeps of sarcococca, *Mahonia (Berberis)* 'Soft Caress', *Hakonechloa macra* 'All Gold', and Rosa Flower Carpet® Amber—add color and texture. New trees, such as *Magnolia virginiana* and *Acer japonicum* 'Meigetsu', provide seasonal color and structure.

Hydrangeas in the Camellia Collection

In the Camellia Collection, just north of the New Zealand Forest, we completed the removal and pruning of some large conifers in order to provide more light to existing camellias, stewartias and magnolias. We opened up overgrown beds, reestablished lawn areas, and planted dozens of new plants. Among these were a few camellia cultivars, but most of the new plantings were of several hydrangea species and cultivars that had been acquired largely through donation over the previous two years.

Orange fall foliage on the new American smoketree (*Cotinus obovatus*) just south of the Visitors Center. A nearby sourwood tree (*Oxydendrum arboreum*) sports red fall color.

Because of its well-drained, loamy soil and existing irrigation infrastructure, the camellia section is perfect for growing hydrangeas, so we expanded the hydrangea collection in this area (which merges with the main hydrangea collection in Rhododendron Glen) to showcase more of these summer-interest plants. In the first phase of planting this past year, the species *Hydrangea aspera* and *H. hirta* were added, along with many cultivars of *Hydrangea macrophylla* (both lacecap and mophead selections), *H. serrata*, *H. paniculata*, and *H. quercifolia*. We will begin a second phase of planting in the spring of 2018.

Stewartia Supplemented

The Arboretum has an extensive collection of *Stewartia*, most of which are dispersed throughout the Camellia Collection, including along the path where the camellias merge with the New Zealand Forest. This year we added an unusual shrubby specimen with multiple stems—likely a form of *Stewartia monadelpha*—to the collection in this area.

At the other end of the Arboretum, in a prominent location at the very north tip of Azalea Way, we planted another stewartia, this one a beautiful young *S. pseudocamellia* tree. Donated to us by a Seattle homeowner who was redeveloping property but wanted to preserve the plant, it is located in the bed directly across from the Visitors Center and replaces a magnolia tree that died a couple of years ago. It will bear beautiful white and yellow flowers in June and stunning orange-red foliage in fall.

Pacific Connections

In the Pacific Connections Garden, additional plantings of *Corokia cotoneaster*, *Halocarpus bidwillii*, and *Melicytus angustifolius* helped fill in areas in the New Zealand Forest. Across Arboretum Drive, the area around the patterned screen at the vehicle turnaround was renovated with plants of Australian origin. *Leptospermum grandiflorum*, *L. namadgiensis*, and *L. rupestre* 'Squiggly' will help soften the screen and the infrastructure behind it, as well as provide a textural and floriferous presence of their own.

In the Australian Entry Garden, we planted the eye-catching shrubs royal grevillea (*Grevillea victoriae*), with its pendant, orange flower

LEFT: Pacific Coast hybrid irises in the Cascadia Entry Garden at Pacific Connections.

clusters, and *Eucryphia lucida* 'Spring Grow', boasting glossy, variegated foliage and fragrant, white flowers. In the Cascadia Entry Garden, several new cultivars of Pacific Coast Iris hybrids were added. These irises have proven to be exciting new plants for Northwest gardens, offering brilliant spring blooms in many shades and requiring very little maintenance.

To add diversity to the Cascadia Entry Garden, we also added some manzanita (*Arctostaphylos*) selections and a new cultivar of the mountain hemlock, *Tsuga mertensiana* 'Bump's Blue', which grows slowly and bears lovely, powder-blue foliage. In the Cascadia Forest, we planted *Calycanthus occidentalis*, *Garrya fremontii*, *Lonicera conjugalis*, and *Ceanothus thyrsiflorus*, along with the camas species *Camassia quamash* and *C. leichtlinii*.

Other Additions

In the Witt Winter Garden, *Arctostaphylos densiflora* 'Howard McMinn', *Edgeworthia chrysantha*, *Callicarpa bodinieri* var. *geraldii* 'Profusion', and *Thujopsis dolabrata* 'Nana' were planted to bring further seasonal interest. We planted *Acer caudatifolium*, a stripebark maple species with brilliant-red new growth, at the south end of the garden overlooking the Woodland Garden. In the Woodland Garden, we added *Corylopsis pauciflora* and several *Rhododendron yuefengense*—a promising, medium-sized, pink-flowered species that is fairly new to cultivation.

Just south of the Graham Visitors Center, several large shrubby species were planted where the large row of Leyland cypress (× *Cuprocyparis leylandii*) were removed last year. Here you can now find *Aesculus parvifolia* f. *serotina*, *Cryptomeria japonica* 'Dacrydioides', and *Cotinus obovatus*.

We planted out three true firs grown from wild-collected seed. We added the endangered Ziyuan fir (*Abies ziyuanensis*) from China to the Pinetum, the Taiwanese species *A. kawakamii* to the true fir section north of Rhododendron Glen, and *Abies squamata*—a species from the Tibetan Plateau—to the Sino-Himalayan hillside south of the Rhododendron Hybrid Garden. We also planted a large specimen of *Cryptomeria japonica* 'Cristata' in the south Pinetum, and several other trees and shrubs, large and small, were added throughout the Arboretum.

The coming year promises to be an especially busy one on the planting front, and I'm very excited to see how all the new plantings perform. Come enjoy the new flora and observe the changes as we work to build on the Arboretum's 80-plus years of collection development.

Ray Larson is both the Curator of Living Collections at the University of Washington Botanic Gardens and the Curator of the Otis Douglas Hyde Herbarium, the Arboretum's herbarium housed in Merrill Hall.

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The bald cypress grove photographed from canoe in fall 2017, with the new span of the 520 Bridge visible on the left. (Photo courtesy Larry Hubbell)

Swamp Thing

The Bald Cypress Grove on Foster Island

By Niall Dunne

In March 2014, Arboretum Foundation Special Projects Manager Randall Hitchin led me and other fellow staffers on an expedition to the bald cypress swamp in the Arboretum wetlands. Randall warned us that it would require some bushwhacking, and that the ground would be soggy—but he also promised a worthwhile trip.

We bundled up warm, pulled on our wellies, and set out towards Foster Island. Shortly after we cleared the SR 520 Bridge underpass, Randall led us off trail and into the woods on the northeast shore of the island. After several minutes battling blackberry canes and stumbling through brush, we arrived at what seemed like a land that time forgot.

Surrounding us were about 20 beautiful bald cypress (*Taxodium distichum*) trees. The dense understory was gone, replaced by a wet, spongy, patchwork of pools and bare ground. Brown, coniferous needles carpeted the dry land, while strange, conical, woody structures—the cypress's famed "root knees"—jutted out from the primordial ooze all around us.

Randall hadn't exaggerated: The scene was breathtaking. But it was also a little distressing. Construction of the new 520 Bridge was to begin later that year, and we were unsure about the fate of the cypress grove. Because it was early in the year, the cypress foliage had yet to leaf in, and we could see the old westbound approach of the bridge lurking nearby. This span of bridge was about to be replaced by a significantly wider structure.

A Southeast Swamp Native

Native to swamps, bayous and rivers in the southeastern U.S., bald cypress is a big, tough, deciduous conifer with lovely, fibrous, cinnamon-colored bark. Its soft, feathery, yellow-green foliage turns golden to purplish-brown in fall before dropping. Clusters of one-inch-wide, spherical, green seed cones

The swamp as photographed in March 2014. Root knees surround the bald cypress trees. (Photo by Niall Dunne)

mature to brown and contain triangular seeds that attract wildlife.

For a long time, the function of the root knees that pop up around cypress trunks has remained unclear. Some scientists believe they are "pneumatophores," whose function is to transport oxygen from the aboveground air to the roots of trees submerged in water. Others think the knees might help stabilize the trees in wet, soft ground. Recent experimental research published in the "International Journal of Plant Sciences" supports the pneumatophore theory[1].

About 300 bald cypress were planted in Washington Park Arboretum in the early 1940s—roughly 200 on Foster Island and 100 in the Pinetum, along Arboretum Creek. In a 2009 survey, UW Botanic Gardens Manager of Horticulture David Zuckerman and then-arborist Chris Watson identified 24 surviving trees on Foster Island.

Not long after the expedition to the cypress swamp, I asked David if he knew what was going to happen to the grove. He was concerned about it, too, but had some welcome news: Washington State Department of Transportation (WSDOT) said it was going to try to preserve as many of the trees as possible during the bridge reconstruction. All we could do, at that point, was wait to see what would happen.

Return to the Grove

Fast-forward to fall 2017, and the new westbound approach of the 520 on Foster Island is now built. In mid-September, during the annual Day of Caring event, I ran into David, who was working with volunteers pulling blackberries down by Arboretum Creek in the Pinetum. Under the shade of a large bald cypress, we got to talking about the trees out on Foster Island. David told me he was planning to head out there soon to survey the grove before the winter level of Lake Washington rose too high. He invited me to come along, and we set a date.

A couple of weeks later, we were out on Foster Island, just beyond the newer, larger bridge underpass. A contractor working on mitigation plantings under the new bridge span guided us through the construction fencing, and we walked slowly out towards the bald cypress grove, visible through the clearing next to the bridge.

When we arrived, we could see the stumps of a few bald cypress at the swamp edge next to the bridge, but we could also see plenty of standing trees with trunks wrapped in orange fencing material—presumably to signal their special status to bridge workers. David and I walked deeper into the grove and found most of it intact.

Some changes were obvious, though. In particular, the understory was no longer bare. A dense network of hardhack (a common name for the native wetland shrub *Spiraea douglasii*) had established and was covering the root knees of the trees. The disturbance associated with the bridge construction might have facilitated the influx.

Nonetheless, David seemed pleased. "I am happy to know from our visit that WSDOT only removed four of the original 24 trees that Chris and I mapped," he said. "And aside from the ground vegetation regrowth, hiding many of the root knees, the remaining cypress are mostly in as good of shape as I remember pre-construction. I hope the hardhack doesn't take over. If it does, future access may be limited."

Perhaps after a few years of winter inundations by rising lake waters, the understory will re-stabilize, and the hardhack will retreat. In any case, the hope is that the Arboretum's bald cypress swamp will continue to thrive and inspire future adventures and expeditions.

The Myth of the Foster Island Trees

For years, a seemingly apocryphal story circulated about the planting of the Foster Island bald cypresses. It was said that legendary Arboretum Curator Joe Witt used a canoe to plant cuttings taken from the bald cypresses in Arboretum Creek out on the island shore—sometime around the construction of the 520 Bridge in the early 1960s.

Decades later, Director Emeritus of Washington Park Arboretum John Wott asked Joe's widow, Jean, about the story. "She never heard about a canoe trip," says John. After consulting with Curator of Living Collections Ray Larson about our bald cypress plant records, David Zuckerman says, "No cuttings were ever recorded as having been taken and planted at a later date, around the time of the Evergreen Point bridge construction—so I think we can quell that rumor."

Reference

Craig E. Martin and Sarah K. Francke. "Root Aeration Function of Baldcypress Knees (*Taxodium distichum*)," "International Journal of Plant Sciences," 176, no. 2 (February 2015) 170–173.

Niall Dunne is the editor of the "Bulletin" and the communications manager at the Arboretum Foundation.

TOP LEFT: Randall Hitchin (far left) leading the Arboretum Foundation staff tour to the swamp in 2014. (Photo by Niall Dunne)

TOP RIGHT: David Zuckerman surveying the edge of the bald cypress swamp in fall 2017. (Photo by Niall Dunne)

Greening a Shoreline Garden

Native camas blooming by the restored shoreline at the Bendich residence. (Photo by Niall Dunne)

By Niall Dunne

A sustainable garden is a connected one. It fosters ecological linkages within its own boundaries and to the larger landscape surrounding it. Among other practices, sustainable gardeners grow locally native plant communities that mirror those in nearby natural areas and greenways, so that their gardens can act—on a smaller scale—as sanctuaries and conduits for wildlife conservation.

But what about when homes and gardens bump up against the sea or a lake? In the Puget Sound region—with its big, beautiful bodies of water—this is a relatively common occurrence. What's the eco-friendly way to connect a garden to a shoreline?

I found out earlier this year, when I visited the Bendich residence on the shores of Lake Washington, in Kirkland. I was attending a media event for a new program called Green Shores for Homes. Managed by Washington Sea Grant—based at the UW College of the Environment—the program provides incentives to homeowners interested in restoring natural shoreline on their properties. It awards LEED-style points for sustainable practices, such as reducing impervious surfaces (like asphalt or concrete), treating water runoff, planting native riparian vegetation, and removing bulkheads.

Bulkheads are basically shoreline retaining walls, and many homeowners on the Puget Sound and around our larger lakes construct these walls to protect their properties from wave-related erosion. (Scientists estimate that a quarter of the Puget Sound's 2500-mile shoreline is armored with sea walls.) But bulkheads sever the natural connection between land and water. They create turbulence that actually erodes the beach in front of them and starves the shoreline of habitat for invertebrates, birds and fish.

In most cases, bulkheads are not even needed, and a contoured beach, softly armored with some boulders, logs and native plants, provides all the protection against erosion or flooding that a shoreline home needs. A "green shore" is a true win-win: It not only helps restore the ecological health of the land-water interface, but also provides the homeowner with benefits such as beach access and a beautiful space to interact with nature.

Courtesy The Watershed Company

Inspired by Nature

And that's exactly what I found at the Bendich home. The garden is magnificent—a brainchild of the award-winning landscape designer Paul Broadhurst (broadhurstassociates.com). Before it got its makeover, the garden was a relatively sterile landscape dominated by a lawn running between the house and the lakeside bulkhead. Broadhurst worked with the Bendich family to transform the yard into a naturalistic shoreline filled with native shrubs, prairie grasses and wildflowers.

Inspiration for the garden came from a number of sources. Pam Bendich told me about how she and her husband, Albert (now deceased), visited the restored shoreline at the Olympic Sculpture Park and were captivated by the idea of removing bulkheads to benefit marine birds and juvenile salmon.

To help the family envision the shoreline garden and plantings, Broadhurst took them on a kayak trip to the Nature Conservancy's Yellow Island Preserve, in the San Juan Islands. The small island is famed for its intact native grasslands and springtime wildflowers, which run right up to the water's edge.

Broadhurst removed 150 feet of bulkhead and a shoreline gazebo, along with the lawn and some ornamental shrubs. He then re-sloped and revegetated the riparian area with native plantings and re-contoured the shore with a mix of cobble and gravel, adding a layer of spawning gravel to enhance shallow water habitat for salmon. Boulders and large woody debris were also added to the gravel beach to attenuate wave energy and add habitat complexity.

A lush, native, lowland meadow now borders the lake shore. It's planted with Roemer's fescue (*Festuca roemeri*), Oregon iris (*Iris tenax*), wild stonecrops (*Sedum oreganum* and *S. spathulifolium*), Menzies' larkspur (*Delphinium menziesii*), and several types of camas (*Camassia*). Bulrushes grow on the beach and—along with the insect life visiting the meadow and other beach-side plantings—contribute to the shoreline food web. A diversity of wildlife now visits the shore, including bald eagles, herons, fish, freshwater crayfish, and even the occasional otter.

"There is now a seamless progression from an ornamental landscape nearer to the house to a much wilder, natural one at the living shoreline," says Broadhurst. "The homeowners value and enjoy this. They now think of their landscape as 'habitat.'"

Incentives to Restore

The restored shoreline garden has received rave reviews and lots of media attention. It also became the pilot project for Washington Sea Grant's new Green Shores for Homes program, a cross-border collaboration with the Stewardship Centre for British Columbia.

Funding to create the program came from the U.S. Environmental Protection Agency through its Puget Sound Watershed Management Assistance Program, says Sea Grant's coastal management specialist, Nicole Faghin. "We hired a team of specialists who used the best available science to create the technical credits and points system for the program."

Homeowners earn points—and a final rating—in four main categories: "shoreline physical processes," "shoreline habitat," "water quality" and "shoreline stewardship." A detailed explanation of the rating system and application process

can be found in the "Green Shores for Homes: Credits and Rating Guide," which is published on the website greenshoresforhomes.org.

The Bendich home earned a "Chinook" or level-1 rating, garnering points in all four rating categories. Green Shores for Homes is building momentum; Faghin and company have so far certified four properties in Washington and three in B.C. New projects are getting underway at homes in Seattle and Mason County.

Local governments are getting in on the action, too. In spring 2017, the City of Kirkland became the first jurisdiction in Washington state to officially embrace the Green Shores for Homes program. Christian Geitz, a planner with Kirkland's Planning and Building Department, was initially drawn to the program when he trained as a verifier for it.

"I quickly realized how well the goals of the program work with Kirkland's current codes and line up with our Shoreline Master Plan for removing bulkheads and restoring natural, dynamic and active shores along Lake Washington," says Geitz. "I also like the idea of how the program will connect natural shorelines all the way from our lakes out to the marine environment."

Green Shores for Homes also dovetails nicely with "Green Shorelines," a guidebook produced by the City of Seattle (see www.govlink.org/watersheds/8/action/GreenShorelines). It offers tips for lakeshore homeowners about green shoreline practices (including green dock designs), and information on estimating restoration costs and getting through the permitting process.

Though not yet tied to any tax reduction plan, Green Shores for Homes does offer potential financial benefits for homeowners in the form of a smoother permitting process. "As with green home projects," says Geitz, "we can offer faster review times to designers and contractors who submit plans that incorporate the Green Shores rating system. Time saved in permit review is money!"

Add this to the bragging rights that come with Green Shores certification—not to mention beach access and the joys of watching a shoreline habitat recover—and you've got a suite of incentives that are tough to ignore.

Further Reading: Washington Sea Grant offers a range of shoreline living and restoration programs in our region. To learn more, go to wsg.washington.edu/community-outreach/shoreline-living-and-restoration/.

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Native Ferns in the Japan

ADDING TEXTURE, COLOR, AND SENSE OF PLACE

By Corinne Kennedy

When Juki Iida was designing the Seattle Japanese Garden in the late 1950s, he decided to preserve a Depression-era stone bridge at the south end of the pond area and integrate it into his vision for the garden. He also chose to include plants native to the Pacific Northwest—even though these species are not found in the gardens of Japan. Both decisions were consistent with the essential nature of Japanese gardens: that they be "rooted in place," reflecting the landscape where they're created.

For me, the native conifers, shrubs, perennials, groundcovers and ferns planted in the garden at the Arboretum blend seamlessly with its more traditional palette of Japanese plants. In this article, I profile five Northwest native ferns that you'll encounter on a stroll through the 3.5-acre space. Each adds its own distinctive texture and color to the shaded areas and streamsides of the garden.

A neighbor of mine once commented that "ferns belong in the woods"—as if they should only grow in places where she wouldn't see them.

LEFT: Moss and native ferns in the "mountain area" at the Seattle Japanese Garden. (Photo by Aurora Santiago)

I hope someday she'll come to appreciate, as I do, the beauty and resilience that ferns bring to nature here in the Pacific Northwest, and to the gardens—public and residential—where they've arisen or have been planted.

Western Sword Fern

Western sword fern (*Polystichum munitum*) is a large evergreen fern native to the Pacific Coast, from California to southeastern Alaska. It grows at low-to-middle elevations, and is common even in urban areas. I live in the Arbor Heights neighborhood of West Seattle, still noted for its large native trees, and I have at least 100 sword ferns on my property. I love them, even though they're not considered "special," and even though they planted themselves!

Sword fern is a tough and adaptable evergreen, cold hardy to USDA Zone 3. It grows from a stout, woody rhizome (or underground stem) and forms a tall mound of erect or arching, dark-green foliage. The leaves, known as fronds, are lance-shaped and pointed at the tips and are divided into sharply toothed, alternating leaflets.

This iconic Northwest fern reaches from three to six feet tall and wide at maturity. Although it does best in moist, well-drained, humus-rich soil in part to full shade, it tolerates less-than-ideal, wet or dry conditions. It will grow in the dry shade beneath tall native conifers, but it won't adapt to every situation: If you plant sword fern in full sun, you'll need to water it regularly.

Western sword fern was used by native peoples for food, medicine and bedding, as well as in the cooking and storage of food. It was also used in a traditional children's game called *pala-pala*. This was a competition to see who could pull the most leaflets from a frond while taking a single breath and at the same time saying "pala" as each leaflet was pulled.

Polystichum munitum grows throughout the Seattle Japanese Garden, but is perhaps most prominent in the "mountain area" in the southwest section of the garden, and also near the Teahouse garden.

Western sword ferns by the large stone, just past the garden entrance. (Photo by Corinne Kennedy)

Deer fern is characterized by two very different kinds of fronds. The sterile fronds (those that don't produce spores) are evergreen, glossy, and delicately cut, and they form a near-horizontal rosette of foliage at the base of the plant. The fertile fronds are deciduous, upright in habit, and have narrower, more widely spaced leaflets. They emerge from the center of the rosette in summer on dark, wiry stems and have a wispy, almost flower-like appearance.

Deer Fern

Deer fern (*Blechnum spicant*) is a smaller, more delicate-looking plant, but it has a wider distribution than sword fern, growing wild in Europe and northeast Asia, as well as in western coastal states of North America. Found in moist-to-wet forests from low to subalpine elevations, it is cold hardy to USDA Zone 5 and matures to about two feet tall and wide.

Deer fern grows best in moist, well-drained, humus-rich soils in light to deep shade, and it benefits from summer watering in our gardens. However, the plant can also tolerate sandy and clay soils.

Traditionally, deer fern leaves were chewed by hunters and travelers to suppress hunger. They were also applied as a medicinal treatment for skin sores. Native Americans reportedly

learned of the fern's healing abilities by watching deer rub their antler stubs on the plant after their antlers fall off.

Blechnum spicant grows in many areas of the Seattle Japanese Garden, but it is particularly prominent at the south end of the garden, in the "mountain area," and near the streams that feed the pond.

Western Maidenhair Fern

Western maidenhair fern (*Adiantum aleuticum*) is a graceful, deciduous fern that typically grows 1.5 to two feet tall and is hardy to USDA Zone 3. Formerly classified as a variety of the East Coast native, *Adiantum pedatum*, it was recognized as a distinct species about 25 years ago. The two species look similar, but the East Coast species struggles in our area, tending to die out over time. The specimen in the Japanese Garden is currently documented as *A. pedatum*, but its nomenclature will be updated.

TOP LEFT: Deer fern, just south of the Tea Garden. (Photo by Corinne Kennedy)

MIDDLE: Western maidenhair fern in the southwest corner of the garden. (Photo by Chie Iida)

RIGHT: Lady fern, outside the Tea Garden, near the pond. (Photo by Corinne Kennedy)

The fern brings a unique, delicate beauty to nature, and to the garden. Its wiry, purple-black stipes (leaf stems) offer a stunning contrast to the bright-green foliage. Each frond of the maidenhair is held horizontally and branches into a large "fan" or "hand" of six to eight, finger-shaped leaflets. Fronds can grow up to 18 inches across.

Western maidenhair fern is native to much of western North America but also has a few small, disjunct populations in New England. It is found at low to middle elevations, thriving in moist, shaded rock crevices. Hikers frequently encounter its ethereal beauty on cliffs and next to waterfalls. The fern thrives in moist, organic, well-drained soils in light to full shade. In gardens, it requires regular watering during our dry summers.

Adiantum aleuticum was traditionally used in basketry, and as a medicine to increase strength and endurance. The name "maidenhair" refers to the delicate, hair-like stems—as well as, perhaps, the plant's fine, dense roots. In the Seattle Japanese Garden, the maidenhair sits beautifully at the southwest corner on a moss-covered log next the stream.

Lady Fern

Lady fern (*Athyrium filix-femina*) is a deciduous native fern that emerges readily as a volunteer, has foliage that's easily broken, and tends to look tattered by the end of summer. Because of these traits, the plant is often taken for granted or considered a weed. In the Seattle Japanese Garden, many (but not all) are removed. In my own garden, lady fern frequently emerges under the canopy of sword ferns. I allow it to grow in spring, when it looks the best, but later in the season, I remove plants selectively based on their appearance and location.

Lady fern has delicate, lance-shaped, finely divided, light-green fronds that arch upwards about two to three feet high, collectively forming a dense, shuttlecock-like clump. Hardy to USDA Zone 4, it grows best in rich, organic, well-drained acid soils, in part to full shade, but it will tolerate full sun with sufficient summer moisture.

A circumglobal species, lady fern is found in moist woods, thickets and meadows throughout North America, Europe and Asia. The common name dates to the ancient Greek idea that its lacy appearance makes it a "feminine" complement to the bulkier-looking male fern, *Dryopteris filix-mas*. The same idea is conveyed by the lady fern's species name: In Latin, *filix* means "fern" and *femina* means "woman."

Native Americans traditionally used the fronds of the lady fern to lay out and cover food for drying, particularly berries. In addition, the young fiddleheads were cooked or eaten raw with grease. (Note: Research shows that it's unsafe to consume the raw new shoots of lady fern, due to high quantities of the enzyme thiaminase, which interferes with Vitamin B absorption; cooking or drying the shoots destroys the enzyme.)

Athyrium filix-femina emerges throughout the Seattle Japanese Garden, but the number of plants allowed to remain varies somewhat from year to year.

Licorice Fern

Licorice fern (*Polypodium glycyrrhiza*) is a small- to medium-sized evergreen fern that adds a lovely, late-season surprise to the landscape. Its primary range is from southeastern Alaska to California, but it also appears in Idaho and the Russian Far East. It grows at low elevations on seasonally wet rocks, logs, trees and humus-rich soil. It's commonly an epiphyte (a non-parasitic plant that grows above the ground, usually on another plant) on the calcium-rich bark of broad-leaved trees, such as bigleaf maple. Like other epiphytic plants, it provides important habitat and food resources for many organisms.

The leathery, lance-shaped, finely toothed fronds resemble those of smaller sword ferns and typically grow between six and 18 inches long. They emerge from scaly, branching, reddish-brown rhizomes, which are edible and have a licorice flavor, hence the fern's common name. (The species name of the plant comes from the Greek *glykys* meaning "sweet" and *rhiza*, meaning "root.")

AT LEFT: Licorice fern near the south end of the pond.

Licorice fern rhizomes were chewed for their flavor by many native peoples. They were dried, steamed, scorched or eaten raw. They were also used to sweeten bitter medicines, and as a remedy for colds and sore throats.

When growing the fern in a garden setting, try to recreate its natural habitat as best as possible. Locate the plant in shade to partial sun, in a moist, humus-rich soil. (Naturally mossy sites in the garden should provide agreeable growing conditions.) The plant is typically summer-deciduous—meaning the foliage dies back in the hot months, only to reappear fresh and bright to reinvigorate the garden during the fall and winter.

In the Japanese Garden, *Polypodium glycyrrhiza* grows near the south end of the pond, on the west side of the stepping stones that cross the stream. It also grows near the west-side fence, between the garden's southwest corner and the stream.

Adapted from an article that originally appeared on the Seattle Japanese Garden blog, https://www.seattlejapanesegarden.org/blog/

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Corinne Kennedy is a garden guide, frequent contributor to the Seattle Japanese Garden blog, and retired garden designer.

ERRATUM

The photo on the cover of the fall 2017 "Bulletin" was incorrectly labeled "Ruby-Crowned Kinglet." It should have been "Golden-Crowned Kinglet."

There was also a typo in the "Name That Bird!" quiz on page 12 in this issue. The old name for the Kestrel was Sparrow Hawk.

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Frances Kinne Roberson

By Walt Bubelis

Early on in my career teaching horticulture at Edmonds Community College, I had the chance to meet Frances Roberson (1902–2002). I must have seen an advertisement for her nursery in the "Arboretum Bulletin," which led me to look her up. The nursery was close to Northgate Shopping Center but in a residential neighborhood. I recall finding a series of glasshouses and outdoor concrete water tanks, the latter holding a variety of aquatic plants. She was gracious enough to show me around the nursery, and to send me home with a start of a plant that I still have today, one *Epimedium* × *perralchicum*.

Although Frances and her husband, Leonard, both started L.N. Roberson Nursery, she was the driving force behind it, as he ran a manufacturing business on the side with up to six employees. (Together, with Frances as the secretary-treasurer, they developed electric heating cables for greenhouses and many other items.) A nurseryman himself, Leonard became president of the Washington State Nurserymen's Association in 1942. He and Frances both received the Washington State Nursery and Landscape Association Pioneer Award in 2001.

She was a passionate plantsperson, sharing her love of plants on many fronts. Over the years, she lectured, taught short classes at the Arboretum and the Center for Urban Horticulture, served on the "Arboretum Bulletin" Advisory Board (from 1955 to 1960), wrote numerous articles for various publications, and served on many plant committees.

Her writings—such as her earliest piece for the "Bulletin" in March 1942, "Rock Garden Plants"—were straightforward in approach and make good reading, even today. Other titles in the magazine show the span of her interests over the years: "*Daphne cneorum*" (Spring 1945), "In Praise of Dwarf Cotoneasters" (Fall 1952), "Bog Gardens" (Spring 1958), and "A Trail in the Olympics" (Spring 1968).

She also wrote articles for "Northwest Gardens and Homes Magazine" and often assisted Editor Dr. John H. Hanley, a past director of the Arboretum. With her expertise in glasshouses, propagation, and aquatic and rock garden plants, it is no wonder she was sought out. Many of her article titles show her creative bent and sense of humor. Who would not want to investigate "A Frog He Would A-Wooing Go" (on water gardens), "When the Groundhog Sees His Shadow" (on dianthus), or "And Everyone Looked in His Neighbor's Face" (on ecological associations)?

A major interest in rock garden plants is revealed in Frances's long-lasting involvement with the Northwestern Chapter of the North American Rock Garden Society. She was a charter member from its inception in 1934 at the home of Else Frye. She served as its president in 1941–42 and again in 1971–72. (Other presidents associated with the Arboretum included Brian Mulligan and Joe Witt.) Frances received the organization's Award of Merit in 1977, an honor given to those who have made outstanding contributions to rock and alpine gardening. Besides writing for the Northwestern Chapter's newsletter, Frances contributed pieces on growing native western plants in the Rock Garden Society's national publication, the "Gardener's Chronicle of America."

RIGHT: Frances in her nursery greenhouse in 1954.

From May 12 to 15, 1955, the Sixth Annual Rhododendron Show was held in the South Concourse of the University of Washington Stadium. L.N. Roberson Nursery used a backdrop of native trees and shrubs to display the rhododendron hybrids they brought to the show, winning an award for their efforts.

Looking over a 1952 catalog of the nursery, I am tempted still by some of the offerings, such as the walking fern (*Camptosaurus rhizophyllum*, now *Asplenium rhizophyllum*), *Aquilegia clematiflora*, *Douglasia nivalis*, *Cassiope lycopodioides*, *Shortia galacifolia*, cypripediums, and on and on. During the years he was director of the Arboretum, Brian Mulligan purchased many plants from Frances. A number still thrive here today, including several interesting spruce and fir varieties that date back to the mid-1940s. Aquatic plants from the nursery also found a home at the Japanese Garden.

The nursery provided a platform that allowed Frances to pursue her interests in the green world and then to share her passion with others through horticultural organizations and personal friendships. Reading over the tributes to Frances in an excellent "Bulletin" article by Pat Bender (Summer 1993), one is struck by how gracious and sharing she was. Giving of oneself resonates down the years. I know, because whenever I pass the *Epimedium* she gave me, I think of her and her generous and knowledgeable nature.

Walt Bubelis is a professor emeritus in the Horticulture Department at Edmonds Community College. He is also a member of the "Bulletin".

Montezuma Pine

Text and Photos By Niall Dunne

Soon after I leave work at the Arboretum each day, I find myself pining for pines. (Apologies! I have a seven-year-old daughter, and bad puns are our main form of entertainment right now.) I admire their open, rounded canopies; rugged bark; long, drooping needles; and fresh, complex fragrance. In the winter, I like to stroll the Pinetum at Washington Park Arboretum and become more familiar with the many wonderful pine species planted there. But perhaps my favorite pine tree is not in the conifer collection at all—it's a big, striking Montezuma pine (*Pinus montezumae* var. *lindleyi*) in the northeast corner of Crabapple Meadow.

Native to mountain regions in Mexico and Guatemala, Montezuma pine is a medium-to-large tree with rough, fissured bark and very long needles (7 to 10 inches), usually held in bundles of five. In his "North American Landscape Trees," Arthur Lee Jacobson describes the pine as a "stout, bold, exuberant species, with long branches of luxurious foliage." I couldn't agree more.

The tree gets its common name from Montezuma II, last of the Aztec Emperors, and is rarely grown in this country—perhaps because it's only suitable for mild climates. At least two varieties are recognized: *Pinus montezumae* var. *montezumae* and *P. montezumae* var. *gordoniana*.

The needles of Montezuma pine grow up to 10 inches long.

The tree's rough, fissured bark is another four-season attraction.

However, the taxonomy is confusing, owing to a proliferation of synonyms back in the 19th century. The Arboretum's variety, *lindleyi*, is described in "Hillier's Manual of Trees and Shrubs" as "beautiful," bearing "slender, drooping, apple-green leaves," but it may be just a synonym for variety *montezumae*, which is highly variable throughout its range.

The specimen in the Arboretum was originally sent to us as seed in 1965 by Fred Lape of the George Landis Arboretum, in Esperance, New York. Mr. Lape collected the seed between the towns of Zimpan and Jacala, in the state of Hidalgo, Mexico, at an elevation of 6000 feet. Two seedlings from the batch were planted in Crabapple Meadow in 1969. Sadly, only one of them has survived to maturity.

University of Washington Botanic Gardens curator Ray Larson says it's unclear what happened to the second tree, which was sited west of its partner, very close to the row of cedars lining the meadow at Arboretum Drive. "I wonder if too much shade and the generally wetter soils of the area took their toll on the second specimen," adds Ray, "and it was removed at some point."

The records do show that the seed we received was originally labeled *Pinus patula*, which is another species found at high elevations in Mexico. The nomenclature was corrected in 1985, after identification work by Arthur Lee Jacobson and Arboretum director emeritus Brian Mulligan.

As if being beautiful weren't enough, the Arboretum's Montezuma pine is also a state champion. It beats out all other specimens in Washington in the categories of height and circumference. (The Arboretum has more than 240 state champions—the largest trees of their kind in girth, height, or crown spread.) When measured in 2004, our pine tree was 73 feet tall, and it is certainly even taller now. True to its name, our Montezuma pine is a tree of regal stature. ~

Niall Dunne is the editor of the "Bulletin" and the communications manager at the Arboretum Foundation.

Q&A from the Miller Library's Plant Answer Line

A Natural Mimic Visits Ballard

By Rebecca Alexander

This regular column features Q&A selected and adapted from the Elisabeth C. Miller Library's Plant Answer Line program. If you'd like to ask a plant or gardening question of your own, please call (206) 897-5268 (UW Plant), send it via the library website (www.millerlibrary.org), or email directly to hortlib@uw.edu.

QUESTION: I live in the Ballard neighborhood of Seattle, and I found a bug in my garden that I'd like to have identified. (See photo attached.) It looks a bit like a wasp. My concern is that it might be an invasive species, or at least a voracious one out to devour my plants.

ABOVE: Adult dogwood borer. (Photo by David Laughlin/USDA)

ANSWER: At first glance, this does look like a clearwing wasp, but it is actually is a type of clearwing moth known for its mimicry of wasps. It may be a strawberry crown moth (*Synanthedon bibionipennis*), which is relatively common in the Pacific Northwest. However, it most closely resembles the dogwood borer moth, *Synanthedon scitula*.

You are right to be concerned about this insect visiting your Ballard garden. Eastern dogwood borer larvae feed on the bark of dogwoods, making their hosts vulnerable to other parasites, and to fungus. Infestation can cause the decline and eventual death of the trees. Signs to watch for are swollen or knotty areas on the bark, sawdust-like frass emerging from tunnels, and leaves turning red prematurely.

The larvae don't just attack dogwoods: Other plants affected by the borer include apple, pecan, beech, willow, blueberry, chestnut, pine, mountain ash, hazel, birch, oak and elm. Apple orchards in the northeastern United States have been suffering from increased borer damage since the 1980s. Unfortunately, the moth is polyphagous—meaning it does not have a discerning appetite. Researchers in the Pacific Northwest speculate that the borer made its way here on nursery stock from the eastern United States.

An invasive species warning is in effect for eastern dogwood borers seen in our state, and infestations should be reported to the Washington Invasive Species Council at 1-877-9-INFEST. In 2012, when the Council published an online fact sheet about the borer (see http://www.invasivespecies.wa.gov/documents/priorities/BarkBoringMothsFactSheet.pdf), the eastern dogwood borer had only been reported in Chelan, Douglas and Spokane counties. Apparently, it's been spreading since then. You can also report sightings of the borer to your local county extension office.

Natural predators may be able to assist you in controlling the eastern dogwood borer. Be sure to encourage birds in your garden (robins, hummingbirds and others), as they are fond of eating the larvae. You might not wish to encourage wolf spiders or black carpenter ants, but they also act as predators. Spiders, bats and some birds consume adult borer moths.

You might wonder why a moth would dress in wasp's clothing. This is an example of Batesian mimicry—where a harmless animal evolves the appearance or warning signals of a harmful one

and is thus avoided by predators. The phenomenon is named for 19th century British naturalist Henry Walter Bates, who observed it while studying butterflies in Brazil. In our case, the dogwood borer is attempting to fool potential predators into believing that it is a stinging insect so that it can go about its business. The disguise enables it to fly carefree in the day and deposit eggs in holes in the bark of dogwood trees; later, larvae hatch and begin tunneling channels through the bark at the site of an injury.

Some dogwood species, such as *Cornus kousa*, are less susceptible to the borer. If you have a dogwood or other susceptible tree, take care not to cause any damage to the trunk or branches. Avoid unnecessary pruning and encounters with lawnmowers or weed-whackers that might leave the tree vulnerable to infestation.

Mimicry in the Plant Kingdom

Insects are not the only mimics in nature. Mimicry happens across the animal kingdom and is also found in plants. For example, in Vavilovian mimicry, weedy plants evolve to resemble domesticated ones, growing in their midst and eluding human intervention.

Perhaps the most famous plant mimics are the orchids that imitate the appearance and/or scent of their insect pollinators. It is an effective pollination system based on deception and the inability of the pollinators to recognize a fake reward. For example, the bee orchids (*Ophrys* species)—widespread in Europe, North Africa and the Middle East—lure bees and other insects to pollinate them by mimicking the insects' appearance and mating pheromones.

Dracula orchids (in the vampiric-sounding genus *Dracula*) use an unusual tactic, taking on both the odor of mushrooms and the appearance of their gills to lure pollinating flies. They seem to combine several types of imitation, including downward-facing stems that place their deceptive, mushroom-like flowers close to the ground where real mushrooms thrive. The *Dracula* orchids also create a rain-sheltered hangout for flies to meet up with their potential mates.

In a form of deception called brood-site mimicry, some plants create floral traps to secure their own pollination. They lure insects with scents and floral structures (usually a chamber whose walls are slippery, sticky, or hairy) that mimic sites where the insects might lay their eggs, but actually direct them toward the flower's sexual parts. Some plants detain the insects for a few days and release them through an escape hatch, but others do not let the imprisoned insects go. Many examples of this are found among flowers in the arum family (Araceae) and birthwort family (Aristolochiaceae).

Rebecca Alexander is the Plant Answer Line librarian at the Miller Library, located in the UW Botanic Gardens' Center for Urban Horticulture (3501 NE 41st Street, Seattle). She is also a contributing editor to the "Bulletin."

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ABOVE: Bee orchid (*Ophrys apifera*). (Photo courtesy Björn S. / Wikimedia Commons)

In a Garden Library

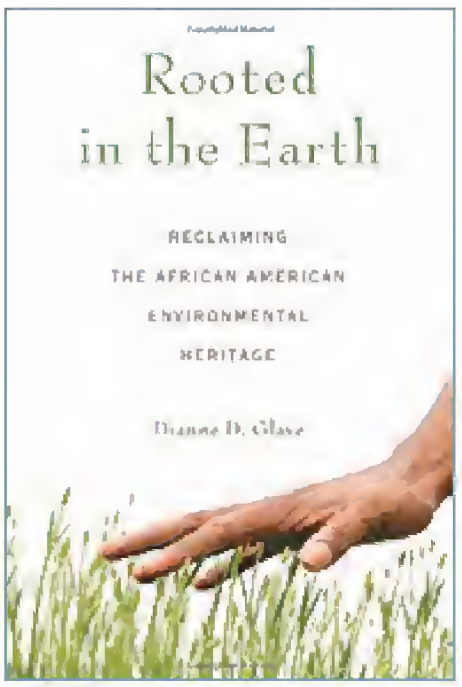
Books by Gardeners of Color

By Brian R. Thompson

For this installment of "In a Garden Library," I am diverging from my usual practice of reviewing new books by Pacific Northwest authors. Instead, I'm selecting a unifying theme amongst authors from a broader geographic range—an approach I plan to use again from time to time.

In this issue, I explore works by people of color. Some of these authors are gardeners or farmers, while others are environmentalists and naturalists, but I think all will broaden our appreciation of our own gardening practices and traditions.

ROOTS



Dianne Glave is very clear about the main argument of her book, "Rooted in the Earth." She writes, "Stereotypes persist that African Americans are physically and spiritually detached from the environment. This wrongheaded notion is so ingrained in our culture that many of us have begun to believe it ourselves. But nothing could be less true."

To illustrate this viewpoint, she begins each chapter with a story. While fictional, these stories weave a convincing portrayal of the history of African Americans, from their roots in Africa up to modern times. All emphasize a strong and vibrant connection to the natural environment as expressed in many ways, including through religion, conservation, nature study and gardening.

I found the chapter entitled "Women and Gardening: A Patch of Her Own" particularly engaging. The focus is on African American women living in the rural southern United States, both before and after the Civil War.

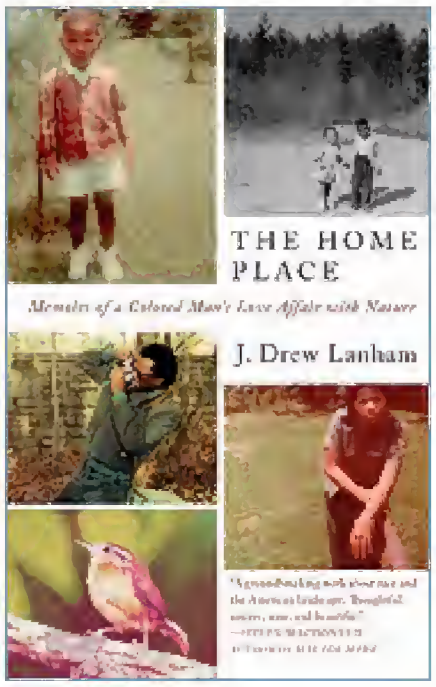
Some used conventional agricultural practices of producing food and other crops in orderly rows. Others embraced a more natural aesthetic that featured a glorious mixture of annuals, perennials and shrubs. While this aesthetic has become popular amongst prominent European and American garden designers in recent years, for African Americans, it's part of an older tradition.

The diversity of the plantings in the natural approach was effective at reducing insect pests and left little room for weeds to thrive. Flowers were grown for their beauty and fragrance, and as ways to entice the neighbors over to visit. In addition, "some gardeners sought ethical, moral, and spiritual enlightenment in these chaotic or wilderness spaces much as their African ancestors had."

BIRDING WHILE BLACK

"The Home Place" is best summarized by its subtitle: "Memoirs of a Colored Man's

Love Affair with Nature." J. Drew Lanham's love for nature, especially of birds, is palpable throughout.



It's a love that was nurtured by Lanham's upbringing in rural, western South Carolina, and began in childhood. "When the chores were finally done, however, I could break free of the house and enter a fantasy world of earth and sky." Despite this desire to escape, he was also a good student and was encouraged to pursue an undergraduate education in engineering. This path would have likely led to a more profitable career, but Lanham realized his heart had a different goal, and he is now a Professor of Wildlife Ecology at Clemson University.

His career choice was not an easy one, and Lanham laments that very few other men of color have pursued the same path. It was also a dangerous choice: Black men heading out to explore natural and rural areas with binoculars may put their lives at risk.

Lanham's advice is simple: "Get more people of color 'out there.'" Echoing the thoughts of Glave, he adds, "As young people of color reconnect with what so many of their ancestors knew—that our connections to the land run deep, like the taproots of mighty oaks; that the land renews and sustains us—maybe things will begin to change."

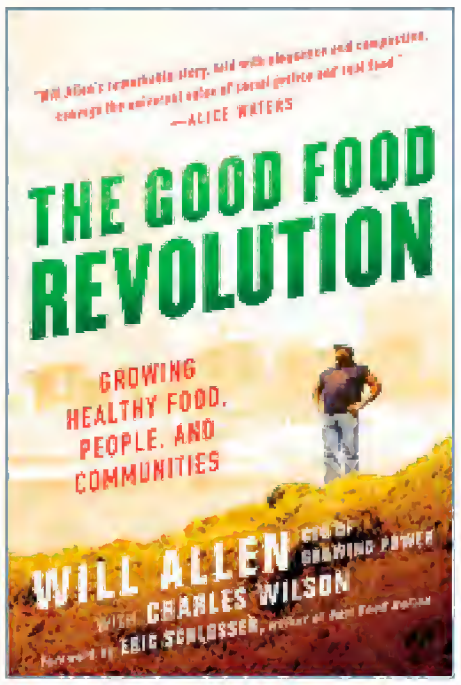
ADDRESSING URBAN DESERTS

Will Allen was raised on a small farm in the Maryland suburbs of Washington, D. C. His parents grew up as sharecroppers in western South Carolina, very close to the home of J. Drew Lanham. As a young man, Allen was embarrassed by his agricultural heritage, and he hoped instead to make it as a basketball player.

A talented competitor in both high school and college, he had a limited career as a professional, primarily playing in Belgium. While in Europe, he had time to observe the local agricultural customs, including the many small farms using traditional, organic practices. This reawakened his interest in growing food. After starting a successful corporate career in metropolitan Milwaukee, he began farming as a hobby.

In 1993, by chance, he discovered the last agriculturally zoned property in the poor, mostly black northern part of the city. At the time, he was in his forties, doing well in his career, but feeling unfulfilled. He decided to purchase the property, leave his safe job, and open a vegetable stand because he "wanted to try to heal the broken food system in the inner-city community where my market operated."

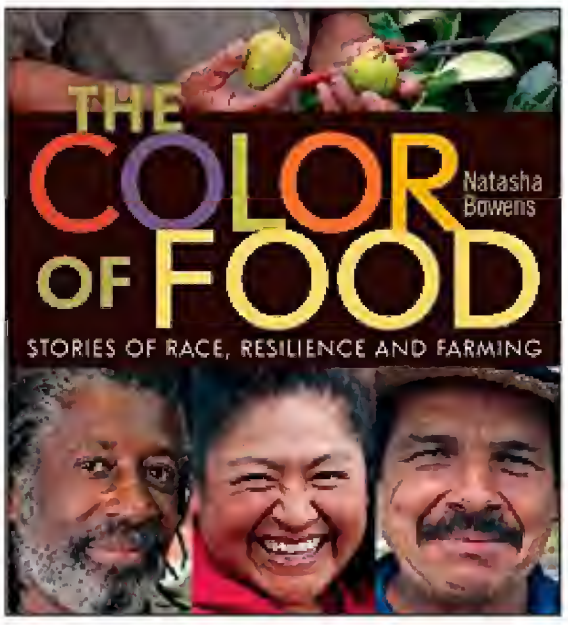
He also wanted to connect Wisconsin farmers to African American communities, especially as Milwaukee is one of the most segregated cities in the country. "But on our small piece of earth, we struggled and celebrated together—black and white, Hispanic and Hmong, young and old—as we worked to produce healthy food."



This hasn't been easy, and much of Allen's "The Good Food Revolution" (co-authored by Charles Wilson) is the story of the last 20 years of building what is now a very successful urban farming non-profit organization that not only serves its home community but has fostered similar programs in many other cities. Allen is a good storyteller, praising the many individuals who contributed to his work, so that they become your heroes, too. While this work is not a panacea to all of the troubles of racism and poverty, it has led to many happy endings.

FARMING ACROSS AMERICA

In describing her book, "The Color of Food," Natasha Bowens explains, "I never would have imagined that my desire to dig in the dirt would lead me here, digging instead into the stories of farmers of color across America—Black, Latina, Native, and Asian farmers and food activists." Initially, Bowens' interest in improving food and agriculture systems led her to working on organic farms, but often as the only "brown person" there. Through her blog (Brown.Girl.Farming), she discovered others like her and decided their stories needed telling.



At the same time, she was learning about her heritage, including the uneasy discovery that her white mother's ancestors owned her black father's ancestors. "I'm literally the product of ownership and oppression reuniting, as if to rewrite the story."

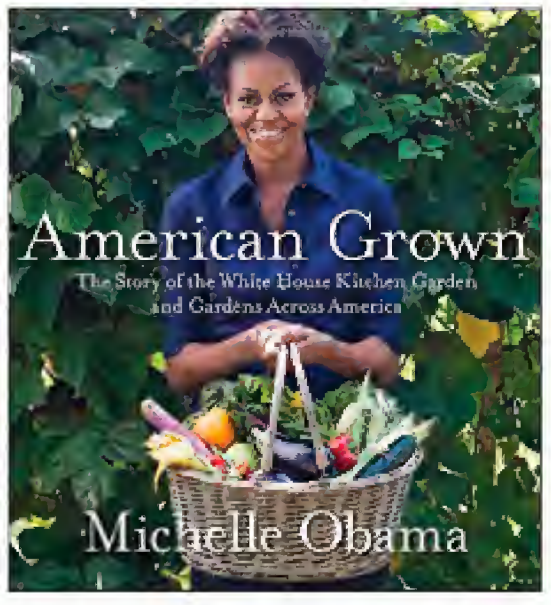
Her trip takes her across the country. For the purposes of this review, I'll concentrate on stories she found amongst farmers on the West Coast. These include Menkir Tamrat, who came to the United States from Ethiopia for college in the 1970s and now lives in Fremont, California. Missing the special ingredients of the favorite dishes of his native land, Tamrat recognized that he would need to grow his own. And this is what he does, but he also enjoys preparing traditional dishes and some of the intermediate ingredients to sell to regional Ethiopian markets and restaurants.

In the Skagit Valley of our state, Nelida Martinez is a Mixteca native—from the state of Oaxaca in Mexico—who now has her own organic farm focusing on raspberries, blackberries and various vegetables. She made this bold move after her son sickened with leukemia, possibly from exposure to pesticides at the conventional farm where his mother once worked. She describes the experience of Latino farm workers as "a lot of humiliation for us, and many of us never think about having our own farm because we feel degraded by the work." Now, she is very pleased to not be working "for anyone else!"

Valerie Segrest is not a farmer in the traditional sense, but rather an advocate for the foraging traditions of her people, the Muckleshoot tribe based in Auburn, Washington. These traditions include harvesting, cooking and eating wild foods in season, a practice that now requires compromise because dams and pollution—or what Segrest calls "European land management styles"—have reduced or contaminated many long-established sources. While she appreciates the role of conservation, she argues that foraging and harvesting by native peoples ensures "a balance with nature where you're working together and not having dominion over that space. Even as foragers, we use harvesting techniques that make it look like we've never even been there while also actually benefitting the plant."

GARDENING ACROSS AMERICA

Michelle Obama needs no introduction, and her book "American Grown," describing the White House Kitchen Garden she started, is already well known. For some, the book may be easy to dismiss as a public service announcement—or worse, a political statement. That is unfortunate because it is a good gardening book, both for the techniques it teaches and



as a model of how gardening improves people's lives in many ways.

This book has many authors. The White House gardening staff share their experiences and appreciation of the garden, along with basic cultural advice geared to both the new gardener and to those unfamiliar with the wide range of delicious foods they can easily grow. White House chefs share tips on harvesting and preserving and provide recipes that make it simple to add more fruits and vegetables to your diet.

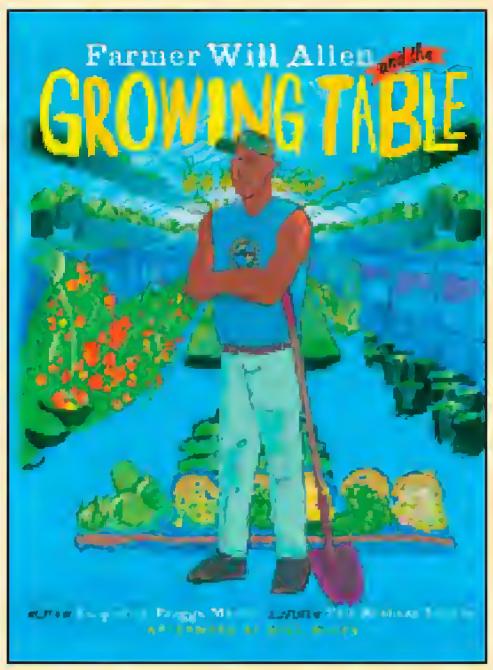
Equity and diversity are quiet background themes in "American Grown," but it is clear that in this garden "equality is a key part of the message of planting day. We are all down in the dirt. Anyone present can help dig. There is no hierarchy, no boss, and no winner."

Obama also reaches out to those involved with community gardens, school gardens and food resources across the country (including Will Allen), and with other programs that encourage exercise for youth and healthy school lunch choices.

One such garden is the New Roots Community Farm in San Diego, where gardeners from Uganda, Kenya, Vietnam, Mexico and Guatemala began working together. "At first, they weren't sure how people from so many different countries would get along—especially since the garden had only two hoses to share and the farmers often didn't speak the same language. But their enthusiasm and determination drew them together." ~

INSPIRING KIDS

The Will Allen story has also inspired a book found in the children's section of the Miller Library. "Farmer Will Allen and the Growing Table," written by Jacqueline Briggs Martin and illustrated by Eric-Shabazz Larkin, focuses on the role neighborhood children played in helping Allen's enterprise succeed.



In vivid colors, this book captures the diversity of food produced in these greenhouses, including the pools for tilapia, chickens for eggs, sprouts for quick greens, and hives for honey. The people are colorful, too, and of many ethnicities and ages.

The children were especially eager to help bring food waste, and to come back every day to watch the red wiggler worms turn these scraps into compost. There is tragedy in this story though, as some of the worms died before the kids discovered the proper care and feeding they required. But, in the end, "the squirmy crew has stayed hard at work."

Brian R. Thompson is the manager and curator of the Elisabeth C. Miller Library of the University of Washington Botanic Gardens. He is also a member of the "Bulletin" Editorial Board.

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